

# ALESIS

## Trigger iO

### ENHANCE YOUR E-DRUM EXPERIENCE

BY **NORMAN WEINBERG**

**W**ith today's best drum sounds coming from software programs rather than hardwired drum brains, it's no wonder that players and audio engineers are looking for easier ways to interface their electronic kit to their computer. If you already own an electronic kit, you can make the computer connection with a MIDI cable, as the kit's brain contains all the necessary trigger-to-MIDI paraphernalia. However, you're also going to need a MIDI interface for your computer, and you'll be bypassing the brain's internal sounds. For another option, there's the Alesis Trigger iO.

With this inexpensive little box, the trigger-to-MIDI concept has been replaced with the trigger-to-USB paradigm. The iO is a "plug-and-play" device (no special drivers) and it can be powered by

the USB cable (no additional power supply). Could this be the next big thing for electronic drummers? Let's check it out.

#### FORM AND FUNCTION

The iO's feature list is somewhat amazing for its price point: 10 stereo inputs, 21 user kits, hi-hat

input, and the ability to change kits with an increment/decrement pedal or trigger. Weighing in at less than 2 lbs. and boasting the dimensions of a slightly oversized VHS tape, the box has a remarkably small footprint. It can be stand-mounted, but a mount is not included with the unit. Unless you buy an optional plate, you'll have to use it as a tabletop device.

If you have older pads that use separate monophonic jacks for the pad and rim, you'll need to use two of the iO inputs. If your pad uses a stereo TRS (tip/ring/sleeve) jack, the Trigger iO will read both signals through a single input. Yes, this means you could also rig up 20 mono pads with special cables.

Thankfully, user interface designs for electronic percussion have been getting better and better over the years. And the operat-

ing system of the iO couldn't be much easier. There are dedicated buttons for moving up and down between functions, as well as for increasing or decreasing values—that's it. All of the iO's features are accessed and controlled from these four buttons.

On the left side of the screen are four small LEDs that light up to indicate the kit function currently active: kit number, program change, trigger MIDI channel, and trigger MIDI note. The screen consists of a three-value LED that displays the value information of the programming function. Included in this screen are two additional small LEDs that light to indicate trigger activity and "Trig B" which is used to program the second voice on a stereo pad. On the right side of the screen are six more LEDs that indicate the trigger setup parameters: gain, velocity curve, threshold, crosstalk, retrigger, and trigger type.

The back of the iO is also laid out in a clean and logical manner. The ten trigger inputs are clearly marked with both the number of the input and names of the kit's instruments, such as kick, snare, crash, and so on. Two additional inputs cover a kit increment and decrement pedal (optional), and the hi-hat's input. Along with the USB jack is a standard MIDI-Out jack that can be used to control other hardware sound modules.

#### DETAILS

**MODEL** Trigger iO

**FEATURES** User Kits: 21 (numbered 0–20)

**INPUTS** 10 Trigger, 1 Footswitch, 1 Hi-Hat

**OUTPUTS** MIDI-Out, USB 1.1

**KIT SETTINGS** Program Change

**PAD SETTINGS** MIDI-Channel, MIDI-Note

**GLOBAL SETTINGS (TRIGGER)**

Gain, Velocity Curve, Threshold, Crosstalk, Retrigger, Trigger Type

**ADDITIONS** Expansion BFDlite, Power Supply, USB Cable

**PRICE** \$299

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## EDITING INDIVIDUAL KITS

Each one of the stereo trigger inputs can send individual notes numbers over individual MIDI channels for the pad and the rim. This offers total flexibility to control a large number of different sounds at the same time. For example, you could have each pad's surface and/or rim trigger control a different sampler inside of Reason 4. If you want to go full bore, you could route the iO's signal to a VST or Audio Units host and access a different plug-in for each pad.

While MIDI-Channel and MIDI-Note settings work just fine for the majority of e-drumming situations, don't expect to become a one-man band or handle highly advanced textural drumming situations without a lot of extra work. The iO doesn't include bells and whistles such as alternate notes, stacked notes, gate time controls, or continuous controller information. Depending on your software, though, you might be able to create some work-arounds that would allow you to take advantage of those features if you really need them.

Setting individual values is pretty easy. You simply strike the pad or rim that you want to program and the iO "chases" to display that input for your programming pleasure. Once you've selected the proper pad, simply select the MIDI channel and the note number. One of the trickier aspects of the operating system is saving your changes to a kit. Since there is no dedicated "save" button, you save your changes by using the function buttons to return to the "kit" function. By doing this, any changes you've made to your programming are automatically saved. If you don't want to save your changes, you press the Function Down and Value Down buttons at the same time. This process is not exactly difficult, but it's not intuitive either — another good reason to RYFM (read your freakin' manual), no matter how simple the OS might seem at first glance. Believe it or not, the manual to the Trigger iO is really pretty good. I found that it was easy to

read and clear to understand. And, the included troubleshooting guide could be very helpful if you run into any problems.

One other programming issue: While the iO chases triggers for programming, the screen doesn't indicate which of the triggers is currently being programmed. If you should accidentally bump into a trigger during the programming process, it's possible that you'll jump to programming a different trigger without realizing it.

## EDITING GLOBAL SETTINGS

As you might expect, global settings are those that affect the trigger inputs for all 21 kits. What many manufacturers call "sensitivity" Alesis calls "gain." By changing the gain setting, you're making adjustments to how hard you'll need to strike in order to get a maximum MIDI volume reading of 127. The values of gain range from 0–20, with lower values requiring more powerful strokes.

It's rare to see so many velocity curves available on a unit in this price range. In all, there are 15 different curves you can call up to suit your playing style or a particular function. Curves include linear, constant, and offset, as well as four each of exponential, logarithmic, and spline curves. The reference manual contains nice graphic illustrations of how the various curves work.

A pad's threshold may need to be adjusted if you're getting false triggering from external vibrations. This value is the minimum signal required for a trigger to send data. Values here range from 3–64.

Crosstalk occurs when the strike from one trigger causes another trigger to vibrate and send a signal. Unfortunately, crosstalk is somewhat common on stereo pads with triggers on the head and rim. Occasionally, crosstalk can occur when pads are mounted on racks that transfer vibrations between separate pads. To cancel crosstalk, weaker signals that arrive at nearly the same time as stronger signals will be ignored. Crosstalk values on

the iO range from 0–7. When this crosstalk value is set to higher numbers, stronger crosstalk velocities will be ignored.

The retrigger value determines how the iO will react to successive triggers from the same input. While adjusting the retrigger time is critical when triggering from acoustic drums, it can also be important when working with pads. The faster you play, the lower you'll want to set these values.

The trigger iO offers a large selection of trigger types to work effectively with a variety of pads. Six different types are offered: piezo/piezo, switch/switch, piezo/switch, switch/piezo, switch (as with a sustain pedal), and hi-hat pedal. The Alesis web site contains a pdf file that lists the compatibility of various manufacturers' pads with the Trigger iO. You may want to refer to this chart to be sure that your pads will operate as desired with the unit. Also on the site is another pdf with a good explanation of dual-zone pads that use both piezo and switch triggers.

## OTHER COOL THINGS

As an added bonus, the iO comes with a copy of Expansion's BFDlite. This is a terrific program. Install the software and you'll be up and playing in just a couple of minutes. While the lite version doesn't contain as many instruments as the full-blown version (9GB worth on two DVDs), it's got enough sounds to get you going and enough features to tease you into buying the whole enchilada. The iO also includes a 9-volt power adapter for when you want to use the unit without hooking up the USB cable.

Unique to the Trigger iO is the ability to upgrade its internal software. While there are no upgrades currently on the Alesis site, should one become available, you'll be able to download it to your computer and dump it into the iO.

## THE MOST IMPORTANT STUFF

No matter what the features are, the most important things about a

trigger interface are how well it tracks your dynamic subtleties and how fast and cleanly it tracks your strokes. I tried the iO with a variety of Yamaha pads, Roland pads, and Alternate Mode pedals. I ran the iO into Reason, Live, and the BFDlite software that comes shipped with the unit. I used both the internal sound engine in my MacBook Pro 2.6GHz Intel Core 2 Duo, and the M-Audio Firewire 410 digital audio interface.

In my tests, the Trigger iO worked pretty much as you would expect. It was relatively easy to tweak the iO so that the pads smoothly responded to my playing style (more adjustments were necessary for my older Yamaha pads). As mentioned earlier, there are several trigger settings that work in a somewhat inter-connected way. If you're not happy with the triggering response right off the bat, don't give up. It might take a little time, but it's time well spent and you only need to do it once.

The unit triggered fast, but wasn't absolutely instant. I really didn't notice much of a difference when using the Mac's engine or the Firewire 410. In fact, depending on your playing style and the type of music you practice and perform, you might not even notice this. Keep in mind that each millisecond of latency is about the time it takes for sound to travel 12". Latency shouldn't bother you until it gets above 10ms. If you're using the iO with a PC and aren't happy with the latency, you can try downloading an ASIO (Audio Stream Input/Output) driver from the Internet. You may find that this helps make the unit faster. ■

## VERDICT

The bottom line is that for this price, there's no other device on the market that does what the Trigger iO can do. It's small, simple, and effective. For all but the most sophisticated users, this may be the easiest way to interface your pads with your computer.